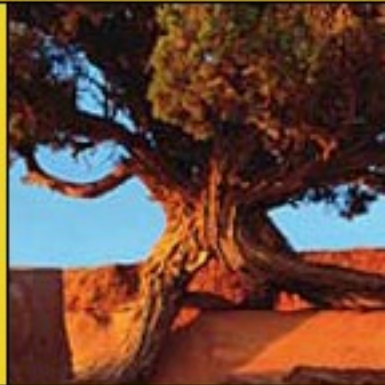
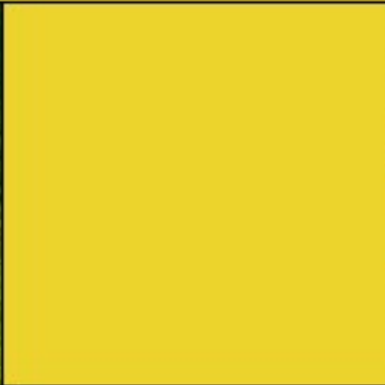
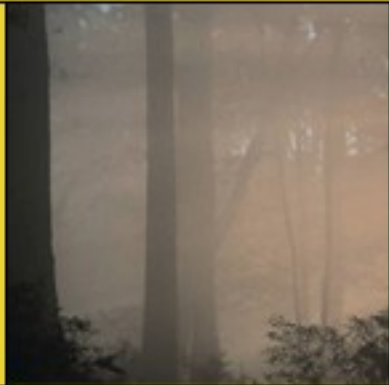


# Solar Roofs From Waste



## Redwood Rubber

*Leader next generation renewable products*

**Tom Faust**

**November 2005**

[www.redwoodrubber.com](http://www.redwoodrubber.com)

**Redwood**



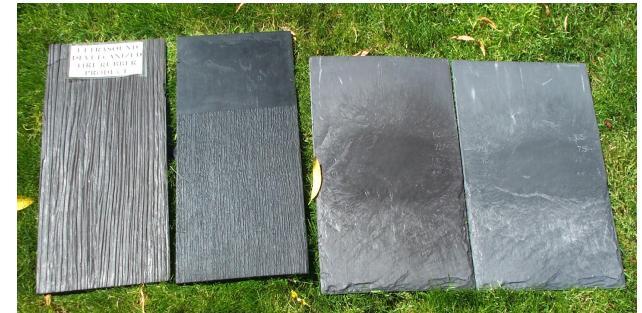


# **MISSION AND NEEDS**

- **Manufacturer of low-cost rubber roof tiles and molded tire rubber out of 600 million annual waste tires**
  - **Devulc costs about 12¢ a pound**
  - **Reduced environmental impact**
- **Management team with global experience in manufacturing, marketing and technology**
- **High margin company.**

# BUSINESS MODEL

- Business Concept of manufacturing tiles & integrated photovoltaic roofing
  - 30 year life span- selling @ steep discount to competitors-
  - Market estimated at \$3 billion for new and replacement dimensional roofing





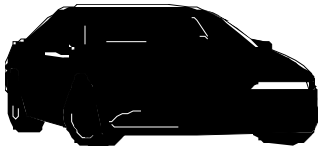
# Roof Tiles Appearance & Value Characteristics

	Rubber/ Devulc	3-Tab Traditional	Concrete
R Value	4.01	.04	.04
Cool Roof	YES	NO	NO
Material cost	12¢ pound	20¢ pound	18¢ pound
Aesthetic	Up-Scale Look	Looks inexpensive	Looks inexpensive



## High Growth Markets 20%-40% year

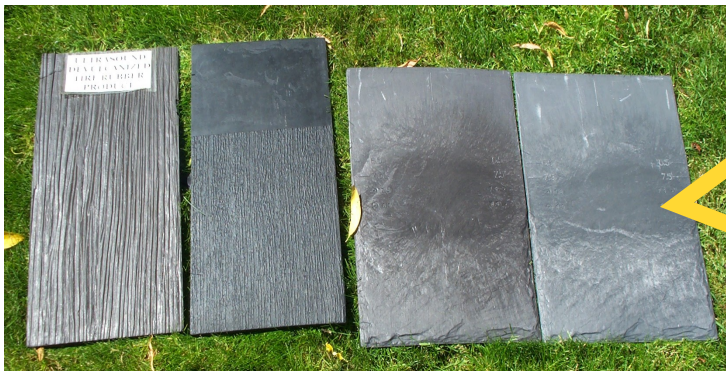
- Roofing slates- \$1 Billion market 20% growth
- New Tire parts \$10 Billion (up to 25% recycled)
- Integrated Solar Roofing (40% growth rate)





# Integrated Photovoltaic Roofing Tile

- Redwood's process provides PV tiles and A “cool roofing” product that is “aesthetically” appealing/easy install



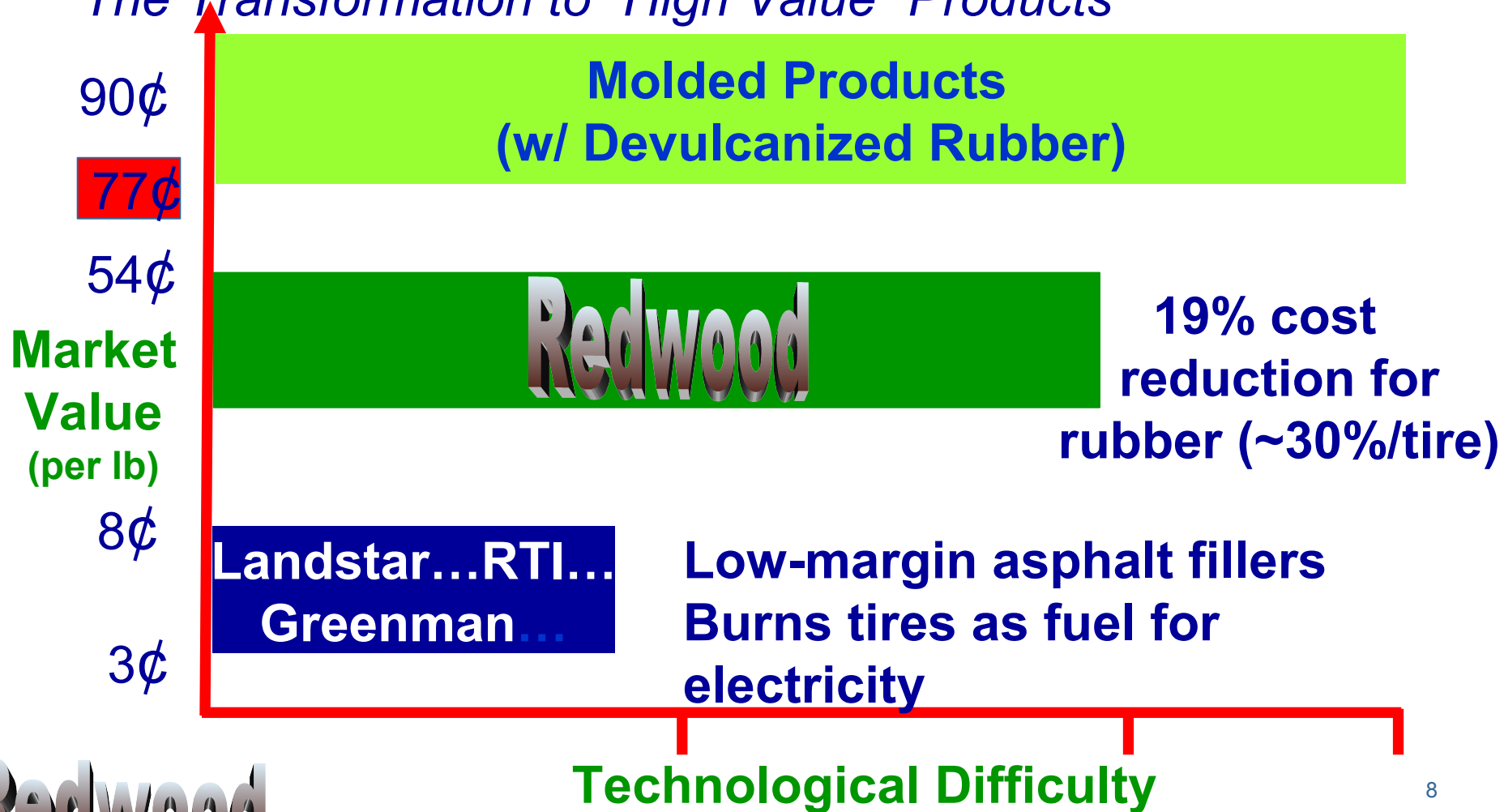
**Redwood has \$20 million  
Purchase Order**

# “Integrated” not unsightly Solar panel system



# Competitive Landscape:

*The Transformation to "High Value" Products*

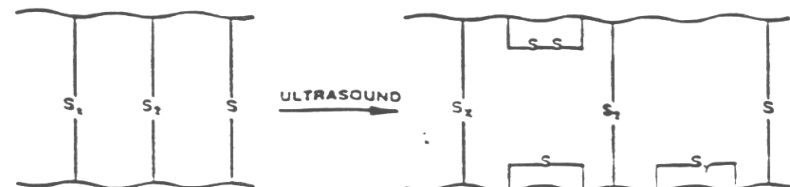
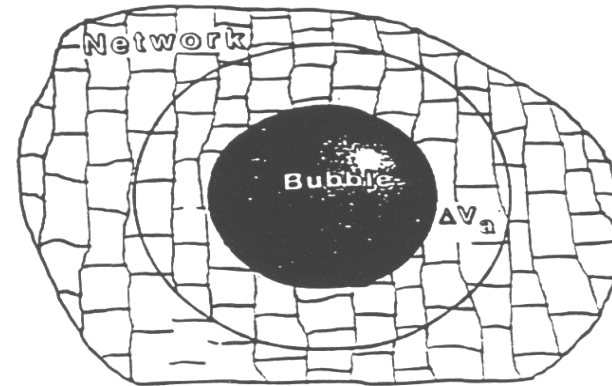
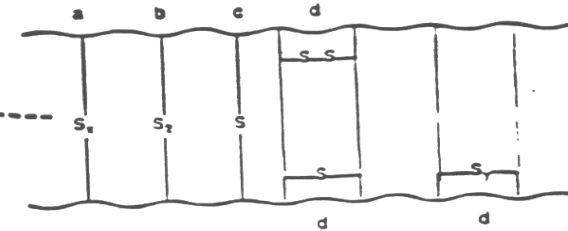




# Ultrasound Devulcanization to → Useable Rubber

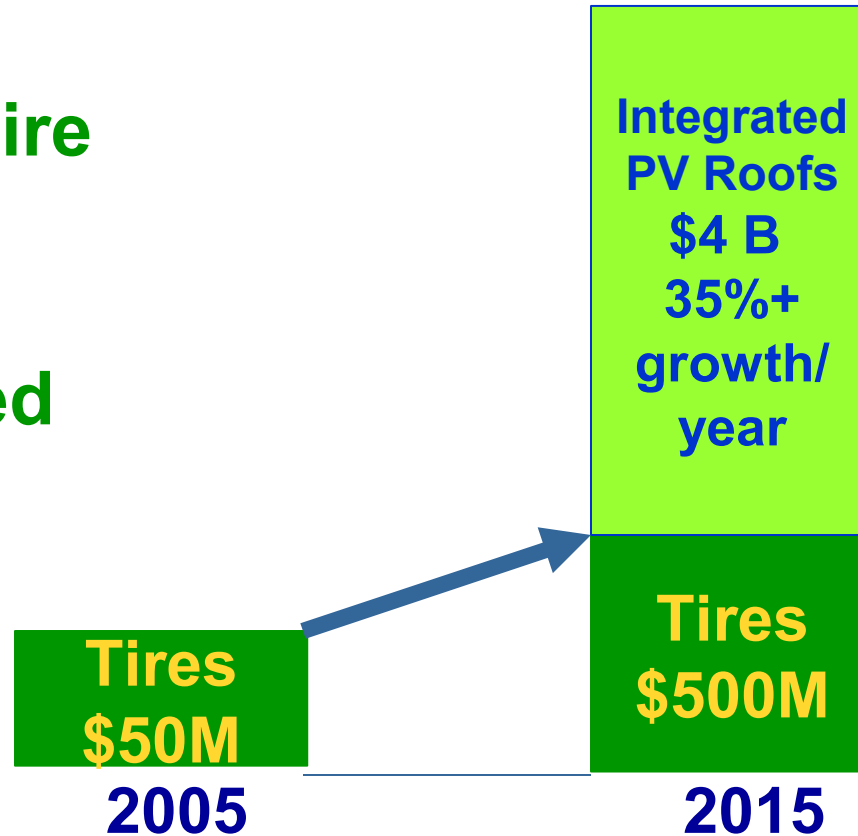
- Cavitation induced shockwaves
- Energy Cost to devulcanize: about 2¢/lb
- Non-polluting
- No similar technology

Sulfur Cross Links



# Redwood Renewable Markets

Immediate tire markets enabled by devulcanized rubber



New tire markets enabled by devulcanized rubber & molded products



# “it’s the team”

- **Tom Faust**, founder/CEO, inventor, Stanford MBA, 20 years General Management experience, 7 years as CEO of integrated company
- **Eric Diatchkovski**, CTO, PhD, 30 years leading elastomer scientist, experienced in tire recycling.
- **Ray Mewchew**, VP Manufacturing, Notre Dame BSEE, Over 25 years of rubber, including 18 years at Michelin Tire
- **Richard Haimann**, VP Engineering, MS Engineering Stanford, MBA Technology Management Pepperdine.
- **Advisory Board**, Mike Malarkey, CEO of Malarkey Roofing (\$100MM roofing mfr),
- Peter O'Donnell, Photovoltaic manager-San Francisco



# Sales Value- Market Drivers

- Redwoods product provides beauty (integrated design), low cost (saves 30%) and energy savings that
- Enables them to keep a cooler home due to improved insulated roof.
- Provides the benefit of generating their own solar electricity at under 8¢ a kWh vs. 13¢ to 33¢ with PG&E. **Customer saves \$3,000 a year.**

# Path To Market



- Building materials...Distributors, Solar OEMs
  - Malarkey Roofing
  - Other roof manufacturers
- Tires...direct to OEM's (Pirelli, Continental, etc.) Pirelli, Continental

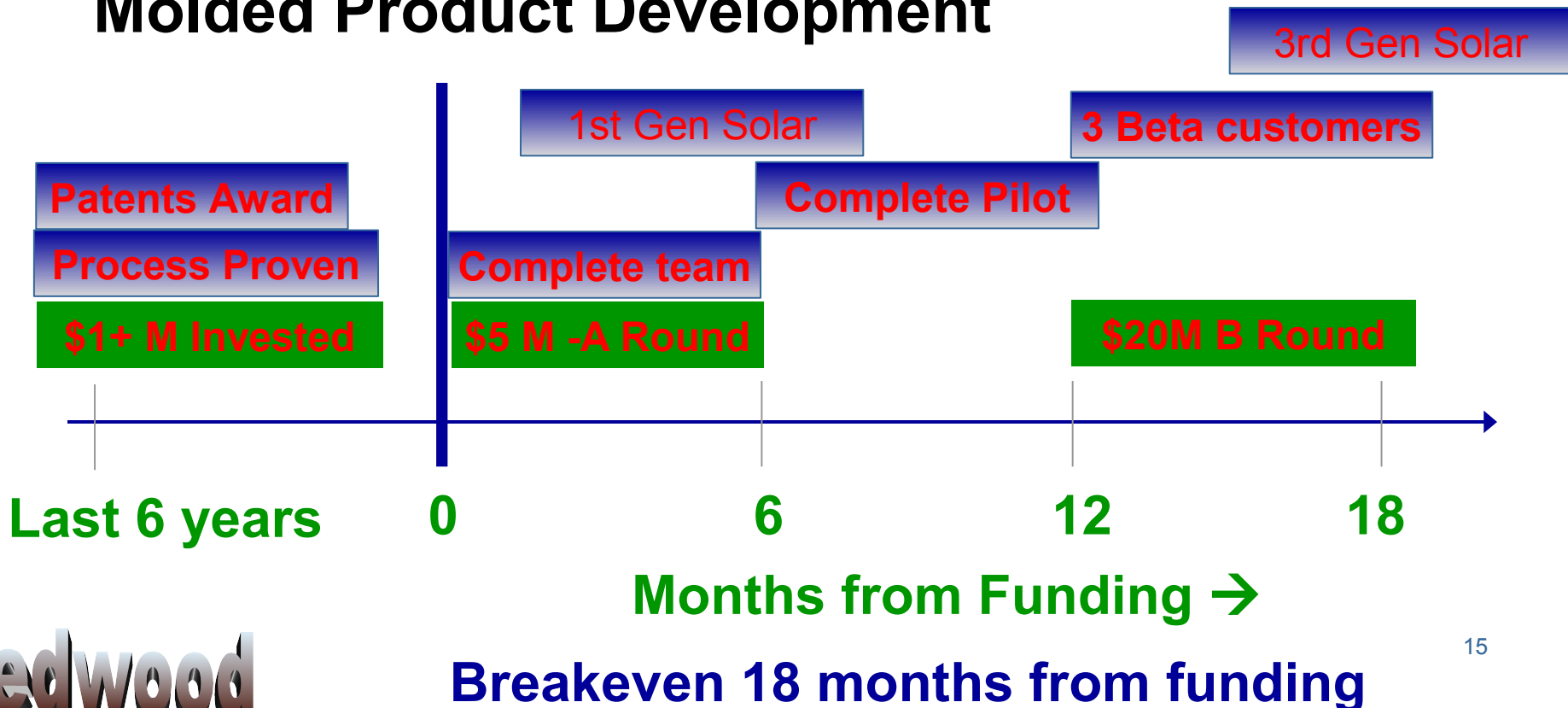


# Revenue After First Plant Built

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
<b>Revenue (\$K)</b>	<b>0</b>	<b>20</b>	<b>100</b>	<b>?</b>
<b>Cost of Sales</b>	<b>-</b>	<b>10</b>	<b>50</b>	
<b>Operating Cost</b>	<b>-</b>	<b>5</b>	<b>8</b>	
<b>Net Income</b>	<b>-</b>	<b>5</b>	<b>43</b>	
<b>CAPEX</b>	<b>5.5</b>	<b>20</b>	<b>25</b>	
<b>Ending Cash</b>	<b>1</b>	<b>5</b>	<b>43</b>	<b>100+</b>
<b>Equity/debt Raised</b>	<b>5.5</b>	<b>20</b>	<b>25</b>	
<b>Headcount</b>	<b>10</b>	<b>44</b>	<b>66</b>	<b>93</b>

# Achievements and Milestones

- Raising \$5.5 million Series A
- Use of Funds: Pilot Production Plant, Team, Molded Product Development





# Redwood Now!

- Redwood Has \$20 Million signed Purchase Order to start
- CA mandating one million new homes be solar- State stimulating /w \$2.5 B subsidy
- European Union ends tire burning by 2008
- Redwood has 12¢ /lb materials, patented products, proven technology & significant head-start